

GOL'DEL'MAN, M.G.; KHILNYSKIY, K.V.

Materials on the clinical and physiological basis for using physical agents in the compound treatment of hypertension. Vop.kur.fizioter. i lech.fiz.kul't. 21 no.4:32-38 O-D '56. (MLRA 9:12)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta fizicheskikh metodov lecheniya (nauchnyy rukovoditel' - prof. D.G.Shefer, dir. - kandidat meditsinskikh nauk N.V.Orlov)  
(HYPERTENSION) (PHYSICAL THERAPY)

KHILEVSKIY, K. V.

SHEFER, D.G.; KHILEVSKIY, K.V.; BELUGIN, A.A.

Mechanism of the development and clinical role of ultraviolet erythema. *Vop.kur.fizioter. i lech.fiz.kul't.* 22 no.6:15-21  
M-D '57. (MIRA 11:2)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (dir. - kandidat meditsinskikh nauk H.V.Orlov) i iz Sverdlovskogo gosudarstvennogo meditsinskogo instituta (dir. prof. A.F.Zverev)

(ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT) (SKIN)

ORLOV, N.V., kand.med.nauk; KHILEVSKIY, K.V., kand.med.nauk; SOVETOV, V.

"General physical therapy" by E.I.Pasynkov, L.R.Rubin. Reviewed  
by N.V.Orlov, K.V.Khilevskii, V.Sovetov. Vop.kur.fizioter. i  
Iech.fiz.kul't. 23 no.2:174-178 Mr-Apr '58. (MIRA 11:6)

(PHYSICAL THERAPY)

(PASYNKOV, M.I.) (RUBIN, L.R.)

MAGAZANYUK, S.S., KHILEVSKIY, K.V.

Complications in treating diseases of the peripheral nervous system  
with galvanotherapy. Vop.kur.fizioter.i lech.fiz.kul't 23 no.4:  
367-368 J1-Ag '58 (MIRA 11:8)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta fizicheskikh  
metodov lecheniya (dir. - kand.med.nauk N.V. Orlov, nauchnyy rukovoditel'  
prof. D.G. Shafer).

(ELECTROTHERAPY)

(NERVOUS SYSTEM--DISEASES)

KHILEVSKIY, K.V.

Effect of sleep induced by various physical agents on the effectiveness of general physical therapy for hypertensives. Vop.kur. fizioter. i lech fiz.kul't. 23 no.6:491-497 M-D '58 (MIRA 11:12)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta fizicheskikh lecheniya (dir. N.V. Orlov; nauch. rukovoditel' prof. D.G. Shefer).  
(SLEEP--THERAPEUTIC USE)  
(HYPERTENSION)

ACCESSION NR: AT4025297

8/0000/63/000/000/0086/0094

AUTHOR: Khilil', V. V.

TITLE: Passage of phase modulated oscillations through linear selective circuits, and accuracy of high speed electronic phase meters

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 86-94

TOPIC TAGS: phase shifter, microwave plasma, electron density, amplification, phase shift

ABSTRACT: The sensitivity of the received signal to the amplification channel and other selective circuits in a phase shifter used to measure fast variations of electron density in a plasma is considered. In view of the complexity of the problem in general form, an approximate method is used in which the transfer function is expanded in

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ACCESSION NR: AT4025297

powers of the deviation from the frequency of the microwave generator. It is assumed that a pulse-modulated signal passes through a selective channel made up of individual resonant circuits which are detuned relative to the central frequency. The best detunings and attenuations of the individual tank circuits are determined in such a way that the selective channel as a whole be optimal from the point of view of minimum signal distortion. It is shown that the distortion is small for any depth of modulation if the bandwidth is selected sufficiently large and measures are adopted to symmetrize the characteristics of the channel. The relation between the bandwidth of the selective channel and the width of the spectrum of the modulating function is determined under some simplifying assumptions for several special cases. Orig. art. has: 18 formulas.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: EC, ME

NR REF SOV: 002

OTHER: 003

Card 2/2

L 38195-66 EWT(1) GD

ACC NR: AT6022230

SOURCE CODE: UR/0000/66/000/000/0019/0027

AUTHOR: Khilil', V. V.

ORG: none

TITLE: Homodyne frequency conversion<sup>2</sup> and FM in the SHF oscillator used in high-speed electron phase meters

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu Radio. 22d, 1966  
Sektsiya radioizmereniy. Doklady. Moscow, 1966, 19-27

TOPIC TAGS: phase meter, SHF oscillator, frequency conversion

**ABSTRACT:** In the millimeter band, the homodyne conversion with FM is advantageous because most SHF oscillators permit quick frequency variation in a wide range. A block diagram of the corresponding phase meter (see Fig. 1) includes a reference oscillator RO which produces a special-shape voltage for modulating the output of the oscillator O; frequency-modulated SHF oscillations are fed into two channels: (a) an electrically short re

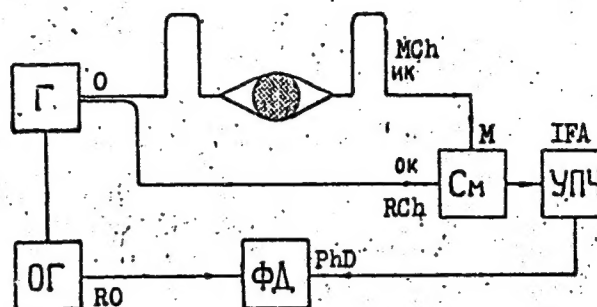


Fig. 1.

channel RCh and (b) an electrically long

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L 38195-66

ACC NR: AT6022230

measuring channel MCh which introduces a delay required for the homodyne conversion. The known phase is measured by an indicator at the output of the phase detector PhD, the latter being fed by an IF amplifier and by R0. Formulas describing the optimal conditions of frequency conversion are developed. An experimental model of the above phase meter designed with an 8-mm wavelength klystron was tested; the modulating voltage was obtained by combining the first and the second harmonics of FM; the optimal conditions were ensured by controlling the amplitude and phase of the second harmonic. The experimental modulating-voltage shape is in good agreement with the theoretical. Orig. art. has: 4 figures and 23 formulas. [03]

SUB CODE: 09 / SUBM DATE: 19Mar66 / ORIG REF: 004 / OTH REF: 003/ ATD PRESS:5045

Card 2/2

JS



L 38268-66 ENT(1)/EEC(k)-2 GD

ACC NR: AT6022231

SOURCE CODE: UR/000/66/000/000/0027/0031

AUTHOR: Khilil', V. V.

ORG: none

TITLE: Measuring small phase angles by the homodyne method of frequency conversion in the SHF band

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio, 22d, 1966. Sektsiya radioizmereniy. Doklady. Moscow, 1966, 27-31

TOPIC TAGS: phase meter, SHF oscillator, frequency conversion, gas discharge plasma

ABSTRACT: The principle of operation and the block diagram of a new homodyne-frequency-conversion SHF phase meter are given (see AT6022230). The new phase meter with a frequency-controlled (8-mm wavelength) klystron oscillator and a modulation frequency of 500 kc was used for investigating gas-discharge plasma processes. All SHF-channel elements were built from standard 3.4 x 7.2-mm waveguide. Group delay time,  $5.6 \times 10^{-8}$  sec (2.8% of the modulating-wave period); maximum gain, 50000; amplifier passband, 215 kc (resolution, 10  $\mu$ sec). The phase meter was intended for measuring phase angles about  $10^\circ$ ; spurious modulation was reduced by using the reference line and the measuring channel of equal lengths. It is claimed that the phase meter has good noise rejection and permits phase-shift measurements even under strong-noise conditions which prevail in high-temperature-plasma outfits. Orig. art. has: 1 figure and 7 formulas. [03]

SUB CODE: 09 / SUBM DATE: 19Mar66 / ORIG REF: 001/ ATD PRESS: 5046

Card 1/1

ARONOV, I., kand. tekhn. nauk (Kiyev); KHILINSKAYA, L., inzh. (Kiyev);  
YASKE, M., inzh. (Kiyev)

Using the heat of flue gases. Zhil.-kom. khoz. 12 no.5:31  
My '62. (MIRA 15:10)

(Waste heat) (Flue gases)

ARONOV, I.Z.; KHILINSKAYA, L.G.; KISELEV, M.Ye.; YASKE, M.F.

Improving the utilization of natural gas in boiler rooms.

Prom.energ. 16 no.9:32-33 8 '61.

(MIRA 14:8)

(Gas as fuel)

SOLLOGUB, V.B.; CHEKUNOV, A.V.; KHILINSKIY, L.A.; GARKALENKO, I.A.

Results of experimental seismic studies of the internal structure  
of the crystalline basement in the northern part of the Krivoy Rog  
Basin. Geofiz.sbor. no.1:24-31 '62. (MIRA 16:3)

1. Institut geofiziki AN UkrSSR.

(Krivoy Rog Basin--Seismic prospecting)

(Krivoy Rog Basin--Geology, Structural)

SOLLOGUB, V.B.; LOSSOVSKIY, Ye.K.; KHILINSKIY, L.A.; GORBENKO, V.S.; SOKOLOV, B.N.;  
NIKIFORUK, B.S.

Use of high-frequency seismic prospecting for dividing metamorphic rock  
complex in the Belozerska iron-ore deposit. Geofiz.sbor. no.2:46-61  
'62. (MIRA 16:3)

1. Institut geofiziki AN UkrSSR.

(Belozerska region (Zaporozh'ye Province)—Seismic prospecting)  
(Belozerska region (Zaporozh'ye Province)—Crystalline and metamorphic)

SOLLOGUB, V.B.; CHEKUNOV, A.V.; KALYUZHNAJA, L.T.; KHILINSKIY, L.A.;  
KHARECHKO, G.Ye.

Internal structure of the crystalline basement in the south-  
western part of the Korosten' pluton according to seismic data.  
Geofiz. sbor. no. 5:122-130 '63. (MIRA 17:5)

1. Institut geofiziki AN Ukr SSR.

SOLLOGUB, V.B.; CHEKUNOV, A.V.; KALYUZHNAJA, L.T.; KHILINSKIY, L.A.

Deep-seated structure of Korosten' pluton according to seismic data.  
Dokl. AN SSSR 152 no.5:1215-1217 O '63. (MIRA 16:12)

1. Institut geofiziki AN UkrSSR. Predstavleno akademikom V.S. Sobolevym.

SOLLOGUB, V.B.; CHEKUNOV, A.V.; PAVLENKOVA, N.I.; GARKALENKO, I.A.;  
KHILINSKIY, L.A.; SHPORT, L.P.

Crustal structure of the Crimean plain and Sivash region  
according to geophysical data. Sov. geol. 7 no.8:44-56.  
Ag '64. (MIRA 17:10)

1. AN UkrSSR.



SOLLOGUB, V.B.; CHEKUNOV, A.V.; PAVLENKOVA, N.I.; ~~KHILINSKIY, L.A.~~

Nature of the Novotsaritsynskaya gravity anomaly in the  
Crimean plain according to seismic studies. Geofiz. sbor.  
no.8:3-12 '64. (MIRA 18:6)

1. Institut geofiziki AN UkrSSR.

SOLLOGUB, V.B., doktor geol.-min.nauk; CHEKUNOV, A.V.; KALYUZHNYA, L.T.;  
~~KHILINSKIY, I.A.~~

Structure of the upper part of the crystalline crust in the Obruch  
syncline region based on seismic data. Geofiz.sbor. no.1:18-26  
'65. (MIRA 18:12)

1. Institut geofiziki AN UkrSSR. Submitted June 19, 1964.

KHILINSKIY, V.M.

Quality is of utmost importance. Vest. svyazi 23 no.9:31 S  
'63. (MIRA 16:10)

1. Predsedatel' gruppy sodeystviya organam partiyno-gosudarstvennogo kontrolya na Kiyevskom tsentral'nom telegrafe.

KHILINSKIY, V.M.

Use all means to eliminate shortcomings. Vest, sviazi 24 no.9:24  
S '64. (MIRA 17:11)

1. Predsedatel' gruppy sodeystviya partiyno-gosudarstvennomu  
kontrolyu pri Kiyevskom tsentral'nom telegrafe.

*Khil'kevich*

COUNTRY : USSR  
SUBJECT : Cultivated Plants. Fruits. Berries. Nuts. Tea.  
ABST. JOUR.: Ref Zhur-Biologiya, No. 5, 1959, No. 20487  
author : Khil'kevich, M.  
INST. : Novo-Dzhankouskiy Sovkhoz, Crimea  
TITLE : Accelerating the Training of Grape Vines.

ORIG. PUB.: Vinogradarstvo i sadovodstvo Kryma, 1958, No. 3,  
11-15

ABSTRACT : A production trial of methods of speeding up the training of the vines at Novo-Dzhankouskiy Sovkhoz (in the Crimea) has demonstrated that acceleration of training by the side-shoot method and by bending the vines provides for young grapevines setting about fruiting in the third year of vegetation with a productivity of 30-35 cwt/ha. Both methods produced identical yields and quality. In association with the fact that bending the vines can be

CARD : 1/2

[illegible]

BONDARENKO, S.A.; DONDAREVSKIY, S.N.; KHILIN, M.S.; KATS, Ye.A. (g. Kuybyshev); KRIVOV, N.V. (Stalinskaya oblast'); MULTANOVSKIY, V.V.

Teachers' letters on a physics textbook. Fiz. v shkole 17 no.3:  
76-77 My-Je '57. (MLRA 10:6)

1. 5-ya srednyaya shkola, g. Kamensk-Shakhtinskiy (for Bondarenko).
2. 10-ya srednyaya shkola, st. Kiyev (for Bondarevskiy).
3. 1-ya srednyaya shkola, Belgorodskaya oblast', g. Gubkin (for Khilin).
4. 1-ya Belokholunitskaya srednyaya shkola Kirovskoy oblasti (for Multanovskiy).

(Physics--Textbooks)

**KHILINSKIY, A.G.**

These train delays could have been avoided. Elek. i topl. tiaga  
2 no.2:40-41 F '58. (MIRA 11:4)

1. Starshiy mashinist elektrovoza depo Moskovka, Omskaya doroga.  
(Electric locomotives--Maintenance and repair)



KHILINSKIY, A.G., machinist

Reliable circuit for the protection of contactors. Elek. i  
tepl. tiage 4 no. 9:38-39 S '60. (MIRA 13:12)

1. Depo Moskovka Omskoy dorogi.  
(Electric locomotives) (Electric contactors)

KHIL'KENBRYDER, F.

[Pruning and grafting fruit trees and berry bushes] Obreska i  
privivka plodovykh derev'ev i iagodnykh kustarnikov. Moskva,  
M-vo sel'skogo khoz.RSFSR, 1959. 139 p. (MIRA 13:8)  
(Grafting) (Pruning)

AKULINICHEV, I.T.; ANDREYEV, L.F.; BAYEVSKIY, R.M.; BAYKOV, A.Ye.; BUYLOV, G.G.  
GAZENKO, O.G.; GRYUNTAL', R.G.; ZAZYKIN, K.P.; KLIMENTOV, Yu.F.;  
MAKSIMOV, D.G.; MERKUSHKIN, Yu.G.; MONAKHOV, A.V.; PETROV, A.P.;  
RYABCHENKOV, A.D.; SAZONOV, N.P.; UTYAMYSHEV, R.I.; FREYDEL', V.R.;  
~~KHIL'KEVICH, B.G.~~; SHADRINTSEV, I.S.; SHEVANDINA, S.B.; ESAULOV,  
N.G.; YAZDOVSKIY, V.I.

Method and means of medical and biological studies in a space  
flight. Probl. kosm. biol. 3:130-144 '64. (MIRA 17:6)

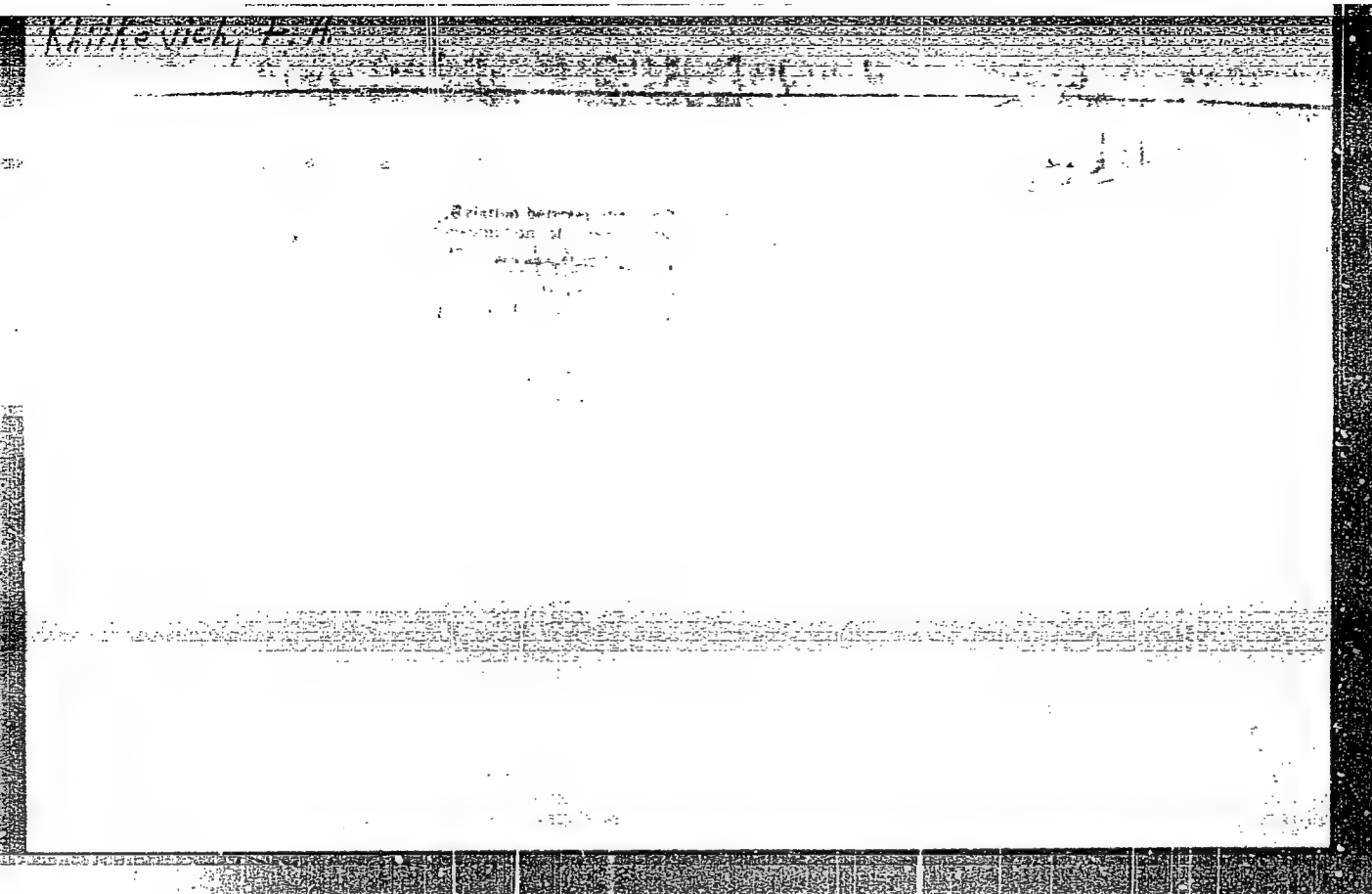
KHILKEVICH, E. K.

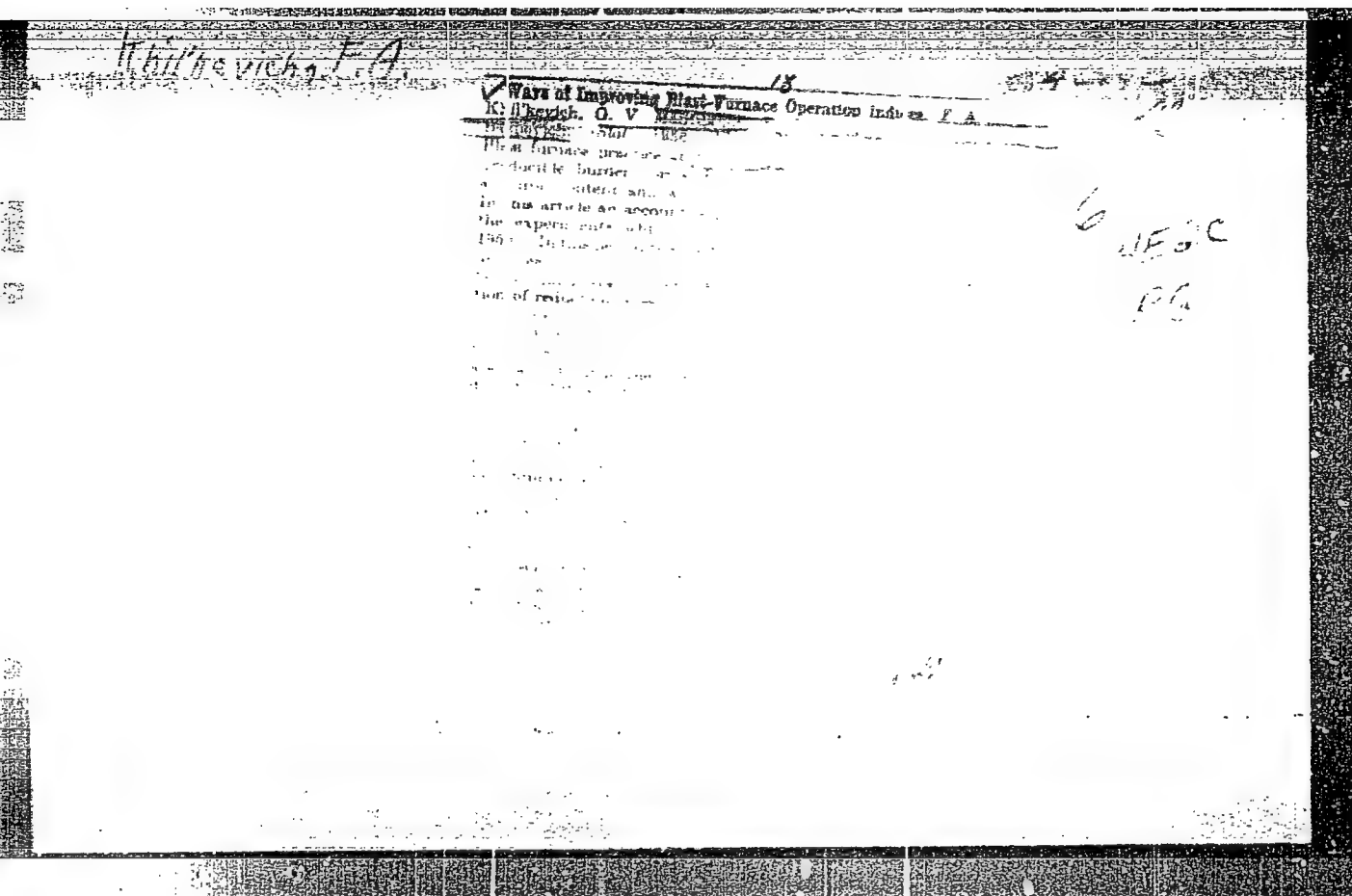
Hil'kevič, E. K. From the history of the dissemination and  
development of the ideas of N. I. ...  
YEARS ...

~~KHIL'KEVICH, E.K.~~

KHIL'KEVICH, E.K. (Tyumen')

M.V. Ostrogradskii's comment on the first axiom in geometry.  
Vop.ist.est. 1 tekhn. no.5:162-164 '57. (MIRA 11:2)  
(Geometry, Plane)  
(Ostrogradskii, M.V.)









KHILKEVICH, F.A.

12  
1-452C  
1-128

Portland cement clinker from enriched molten blast-  
furnace slag N. V. Osmitskiy, V. M. Stetsko, I. M.  
Ben'yaminovich, F. A. Khilkevich, I. B. Brest, A. S.  
Naumenko, L. N. Sadikey, N. N. Sadikey, N. N. Sadikey  
and P. M. Malygin  
Limestone is added  
disintegration of  
the melt the

130 - 6 - 3/27

AUTHORS: Khil'kevich, F.A., Lazarev, B.L. and Bazilevich, S.V.

TITLE: Blast furnace operation with oxygenated blast. (Rabota domennykh pechey na dut'ye, obogashennom kislorodom).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No. 6, pp. 3-7 (USSR).

ABSTRACT: The use of oxygenated blast for producing steel-making pig iron and ferromanganese in blast furnaces 1386 and 1100 m<sup>3</sup> in useful volume and operating with medium top pressure, respectively, is described. The experiments were carried out at the Nizhne-Tagil'sk metallurgical combine in 1956-57 jointly with the Central Research Institute of Ferrous Metallurgy and were reported at the recent All-Union Blast-Furnace Conference. The pig iron (0.6% Si, 1% Mn, 0.04% S, 0.2% P) was melted from a mixture of fluxed and unfluxed sinters and magnetite ores. The reducibility and strength of the burden were low. A 90-day trial period with ordinary blast was followed by a total of 6 days with oxygenation to 22.19% O<sub>2</sub>, 14 days at 23.3% O<sub>2</sub> and 8 at 24% O<sub>2</sub>. Blast moisture was kept constant at 20 g/m<sup>3</sup>, blast volume was reduced to keep the time rate of gas production constant and blast temperature was increased. Throat CO<sub>2</sub>-content traverses show that good distribution was maintained, and the operating characteristics of the furnace (coke rate,

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CIA-RDP86-00513R000722010020-7

productivity, CO/CO<sub>2</sub> ratio and calorific value of top gas, coke-burning rate) were better in the oxygenated-blast periods, but the practice is complicated by the deterioration in raw material quality which occurred in part of the 24% period; without this deterioration the productivity was 2063 tons per day compared with 1915 without oxygenation. Because of high oxygen costs at the works direct production costs of the iron were slightly higher with oxygen-enriched blast, but this was offset by improvement in various factors. The manganese ore from which ferromanganese was melted contained much fines and high production rates were difficult to achieve. Oxygenation to 24.3% O<sub>2</sub> for a month gave a productivity increase of 11.2% (from 399.7 to 447.0 tons/day). A relatively acid ((CaO + MgO)/SiO<sub>2</sub> = 1.10 to 1.15) slag was used and blast temperatures were about 1000 C. In general the results are considered to show that it is advantageous to use oxygenated blast for operation on prepared charges.

ASSOCIATION: Nizhne-Tagil'sk Metallurgical Combine.  
(Nizhne-Tagil'skiy Metallurgicheskiy Kombinat).

AVAILABLE:

Card 2/2

Khil'kevich, F.A.

133-7-2/28

AUTHOR: Zakharov, A.F., Khil'kevich, F.A., Bazilevich, S.V. and Lazarev, B.L., Engineers.

TITLE: Smelting of Ferro-manganese in a Large Blast Furnace (Vyplavka ferromargantsa v bol'shoy domennoy pechi)

PERIODICAL: Stal', 1957, No.7, pp. 580 - 584 (USSR)

ABSTRACT: In 1956, the smelting of ferro-manganese was carried out in a large furnace (No.2 furnace Nizhne Tagil'skiy Works) (1 100 m<sup>3</sup>) with high top pressure (0.5 atm.) and oxygen-enriched blast (up to 24.5%). The preparation of the furnace for the transfer from foundry iron to ferro-manganese production, characteristic of raw materials, operational practice and the results obtained are described. The profile of the furnace and the distribution of CO<sub>2</sub> in the top gas along the throat diameter are shown in Figs. 1 and 2, respectively. Material and heat balances are given in Tables 1 and 2, respectively. The comparison of main indices of heat balances of smelting ferro-manganese in three different works is given in Table 3. In addition, the distribution of temperatures and changes in the gas composition along the height of the furnace stack (Fig.3) and the composition of gas in the combustion zone (Fig.4) were studied. It is concluded that on smelting

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133-8-1/28

~~HTK KEY~~ ~~TOP~~  
AUTHORS: Bardin, I.P. (Academician), Trekalo, S.K. (Cand. Tech. Sci.), Zakharov, A.F. (Eng.), Khil'kevich, F.A. (Eng.), and Lazarev, B.L. (Eng.)

TITLE: Smelting of basic pig iron with oxygen enriched blast.  
(Vyplavka peredel'nogo chuguna na dut'ye, obogashchennom kislородом).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.673-684 (USSR).

ABSTRACT: The influence of oxygen enriched blast on the operation of a large blast furnace with a normal profile operating on a prepared burden was investigated. The profile of the furnace is given in Fig.1. The preparation of burden materials is described, their chemical composition during the individual operating periods and physical properties of coke used are given in Tables 1 and 2 respectively. The mean composition of the burden, furnace lining (Fig.2), the composition of pig and top pressure during the individual operating periods was practically the same.

Card 1/5 The following operating periods are considered:

133-8-1/28

Smelting of basic pig iron with oxygen enriched blast. (Cont)

Period	Date	Oxygen content in blast, %
I	1.4-30.6	21.0
II	25.7-30.7	22.19
III	31.7-10.8	23.30
	20. -22.8	
IV	11.8-19.8	24. 0
V	1.9-28.9	21. 0

The operating results obtained during the individual periods are given in Table 3. Operating conditions during the last period V deteriorated due to the formation of a scaffold and deterioration in the state of charging equipment, therefore this period was excluded from further comparison. Daily variations of basic operating factors during the smelting of iron with normal and oxygen enriched blast are shown in Figs.3 and 4 respectively. The influence of oxygen enrichment on the amounts of blast and gas made, CO content in gas and gas made to blast ratio is shown in Fig.5. The comparison of the intensification of the smelting process when using oxygen enrichment under conditions of (a) constant amount of blast and (b) constant amount of gas made per unit time is shown in Fig.6. Material balances

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133-8-1/28

Smelting of basic pig iron with oxygen enriched blast.

APPROVED FOR RELEASE: 09/17/2001

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of the smelting process during the individual periods operating factors and heat balances for the same periods are given in Tables 4, 5 and 6 respectively. The distribution of CO<sub>2</sub> content in the top gas along the throat diameter during the individual operating periods is shown in Fig.7. Variations in the composition and temperature of gas at various furnace levels during the individual operating periods are shown in Figs.8 and 9. Methods used for the determination of the above data are not given. The comparison of cost of production per ton of pig with normal (A) and oxygen enriched (B) blast is given in Table 7. It is concluded that: 1) operation of the furnace with oxygen enriched blast was stable without increasing moisture content of blast. The temperature of the blast was increased by 35-45 C in comparison with the operation on normal blast; 2) oxygen enrichment permitted intensifying furnace driving within the limits of retaining the amount of gas produced per unit of time on the same level as in normal operation; 3) the distribution of the gas stream across the furnace during operation with enriched blast remained normal which was the main factor contributing to

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133-8-1/28

*Khil'kevich, F.A.*

133-9-1/23

AUTHOR: Khil'kevich, F.A. and Bazilevich, S.V., Engineers.

TITLE: An Investigation of the Service Life of Carbon Lining in the Blast Furnace Stack. (Issledovaniye raboty uglerodistoy futerovki shakhty domennoy pechi)

PERIODICAL: Stal', 1957, No.9, pp. 769 - 771 (USSR)

ABSTRACT: The service life of the chamotte lining of blast furnace stack on the above works was lately about 2 - 2.5 years. Moreover, the presence of zinc in the burden increased the erosion of lining and occasionally caused bursting of the shell. In October, 1956, the bottom 7.2 m of the stack of the No.3 furnace was relined with carbon blocks (Fig.1). For the cooling of the carbon lining three rows of plate-coolers placed close up to the external surface of the carbon blocks were used. The seams between the blocks were filled with paste made from foundry coke (0 - 0.5 mm fraction) - 50%, pitch - 22.5% and anthracene oil - 27.5%. The lentil was smoothed with a chamotte-cement tie piece on to which two rows of chamotte bricks were placed followed by a row of lentil coolers on to which the first row of carbon blocks was placed. A number of thermocouples in sheaths was placed into holes drilled in the carbon blocks and connected to recording galvanometers. The temperature of the lining during the heating-up period is shown in Fig.2. Calculated temperature

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133-9-1/23

An Investigation of the Service Life of Carbon Lining in the Blast Furnace Stack.

distribution in the carbon lining is shown in Fig.3. Indications of thermocouples inserted 340 mm into the carbon lining remained during 5 months of the furnace operation on the same level as after blowing in (Fig.4). A high sensitivity of thermocouples (placed near to the hot surface of the lining) to changes in the gas flow in the stack can be used for the control of furnace operation. In order to evaluate the gas permeability of carbon lining measurement of gas pressures on hot and cold surfaces of the lining was carried out. Pressure in the furnace on level 5 (6 100 mm from the lentil) was on average 1.25 atm. gage, and the gas pressure on the cold side of the lining rose and after 9 days reached a maximum (pressure drop 0.59 atm.). Then pressure drop began to increase and stabilised at 1.23 atm., which was apparently due to an intense deposition of zinc in seams. After 30 days of operation when changing thermocouples a thick layer of metallic zinc on the walls of the thermocouple hole was noticed. The gas composition on the hot and cold sides of the carbon lining was practically identical. On the 32nd day, the shell cracked. It was welded but cracking continued due to an intense deposition of zinc in the lining. To prevent the depo-

Card2/3 sition of zinc in the lining itself the authors proposed a

in the editorial note of not much use for preventing the cracking of the shell. In conclusion it is stated that carbon-lining is more stable than chamotte lining and therefore its thickness can

WHITENVICH, G.B.

Mine transfer cars. Biul.tekh.-ekon.inform. no.4:63-65 '59.  
(MIRA 12:7)

(Mine railroads--Cars)

MIKHALIN, G.I.; KHIL'KEVICH, G.Ya.

Diesel manufacture on a new level. Energetik 13 no.11:37  
N '65. (MIRA 18:11)



KHIL'KEVICH, G.Ya., insh.

Use of chromium plating to strengthen new and recondition  
worn-out plunger pairs. Trudy TSNII MPS no. 202:54-70 '60.

(MIRA 13:12)

(Chromium plating)

(Locomotives--Cylinders)

KHIL'KEVICH, N. I.

Priusadebnoe vinogradarstvo [Vinculture on individual plots]. Simferopol', Krymizdat, 1952. 140 p.

SO: Monthly List of Russian Accessions, Vol 6 No 6 September 1953

KHIL'KEVICH, Nikolay Ivanovich

[Possibilities of extending the growing of grapes  
without winter covering in the Crimea] Vozmozhnosti  
rasshireniia granita neukryvnogo vinogradarstva v  
Krymskoi oblasti. Simferopol', Krym, 1964. 35 p.  
(MIRA 19:1)

KHIL'KEVICH, Nikolay Ivanovich

[Viticulture on individual plots] Priusadebnoe vinogradstvo, [Isd.2.]  
Simferopol', Krymizdat, 1956. 197 p. (MLBA 10:3)  
(Ukraine--Viticulture)

1. KHIL'KEVICH, N. M., BOYKO, D. K.

2. USSR (600)

4. Milking

7. Practice of stripping cows. Dost sel'khoz No 12 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KHIL'KEVICH, N. M., Cand Vet Sci -- (diss) "Ovarioectomy in  
Ewes and Its Significance for Fattening." Yerevan, 1956.

24 pp; 1 sheet of tables (Min of Agriculture USSR, Yerevan  
Zooveterinary Inst), 130 copies (KL, 48-57, 108)

- 53 -

USSR/Human and Animal Physiology. Blood. Formed Elements  
of Blood.

T-4

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55449.

Author : Khil'kevich, N.M.

Inst : North Osetia Institute of Agriculture.

Title : The Leukocyte Count in Milk and the Significance of  
this Method for the Diagnosis of Mastitis in Cows.

Orig Pub: Tr. Severo-Osetinsk. s.-kh. in-ta, 1956, 17, 305-312.

Abstract: Milk was poured into a mixer until the 0.5 mark was  
reached. Then, the Giemsa solution (5 drops in 1 ml  
of distilled water) was added until the mark of 11 was  
reached, or a mixture of equal amounts of the follow-  
ing solutions was used: tripanic blue (0.1 gr in 200 ml  
of distilled water) and eosin (0.1 gr in 200 ml of

Card : 1/3

53

USSR/Human and Animal Physiology. Blood. Formed Elements  
of Blood.

T-4

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55449.

distilled water). The leukocytes (L) were counted  
in the chamber of Goryayev. The tests were per-  
formed on 32 healthy cows, on 36 cows with acute  
mastitis, and on 31 cows with chronic mastitis  
(M). Up to 382 L per 1 mm<sup>3</sup> were counted in the  
milk of healthy cows (here, lymphocytes predomi-  
nated). 15,000-25,000 and more L per 1 mm<sup>3</sup> were  
counted in the milk taken from infected parts of  
the udder when acute, especially purulent M was  
present. In the presence of fibrinous M, 12,000-  
22,000 L per 1 mm<sup>3</sup> and more were counted, at the  
presence of serous M the L count per 1 mm<sup>3</sup> was  
2,800-11,000, and at the presence of catarrhal M,  
the count amounted to 4,000-16,000 L per 1 mm<sup>3</sup>.

Card : 2/3

Khil'kevich N. M.

USSR / Farm Animals. Small Horned Stock.

Q-2

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105693.

Author : Khil'kevich, N. M.

Inst : North Ossotia Agricultural Institute.

Title : Topographic Anatomy of the Soft Abdominal Wall  
of Shoop.

Orig Pub: Tr. Sev.-Osetinsk. s.-kh in-ta, 1957, 19, 253-  
268.

Abstract: The experiments carried out on 26 shoop from  
six months to eight years old, belonging to the  
breeds of Soviet Merino, Ossotian, Bozakh and  
hybrids Ossotian x Soviet Merino, and performed  
partly by means of the perfusion of blood ves-  
sels, showed that the soft abdominal wall (SAW)  
of shoop is well developed. Between all the lay-  
ers of SAW there is a porous cellular tissue which

Card 2/2



KHIL'KEVICH, N.M., dotsent

Use of phytoncides in skin diseases of the udder in cows.  
Veterinariia 40 no.7:49-51 J1 '63. (MIRA 16:8)

1. Severo-Osetinskiy sel'skokhozyaystvennyy institut.  
(Phytoncides) (Udder--Diseases)

KHIL'KEVICH, N.M., dotsent

There should be only one concept concerning sterility.  
Veterinariia 41 no.1:83-87 Ja '64. (MIRA 17:3)

1. Severo-Osetinskiy sel'skokhozyaystvennyy institut.

KHIL'KEVICH, N.M., dotsent; TANCHUGIN, Ye.V., vet. inzhener

Treating mastitis in cows. Veterinariia 41 no.5:85-86 1964.  
(MLA 18:3)  
1. Severo-Osetinskiy sel'skokhozyaystvennyy institut (for Khil'-  
kevich). 2. Molokovskaya veterinarnaya lechabnitsa, Krasnokholm-  
skogo rayona, Kalininskoy oblasti (for Tanchugin).

KHIL'KIN, A.M.  
DOBROVA, N.B., kand.med.nauk (Moskva, K-9, Sobinovskiy per., d.6, kv.14);  
KONSTANTINOV, B.A., student V kursa; KHIL'KIN, A.M., student V kursa

Experimental plastic surgery of the aorta with a polyvinyl alcohol  
prosthesis. [with summary in English]. Vest.khir. 79 no.8:86-90  
Ag '57. (MIRA 10:10)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav.  
prof. V.V.Kovanov) 1-go Moskovskogo ordena Lenina meditsinskogo insti-  
tuta im. I.M.Sechenova.

(AORTA, transpl.

polyvinyl sponge graft in dogs)

(VINYL COMPOUNDS

polyvinyl sponge graft in surg. of aorta in dogs)

MIKAYELYAN, A.L.; KHIL'KIN, A.M.

Surgical treatment of aortic valve insufficiency; review of the literature. Eksp.khir. 4 no.3:50-59 My-Je '59.

(MIRA 12:8)

1. Iz kafedry grudnoy khirurgii i anesteziologii (zav. - prof.Ye.N.Meshalkin) Tsentral'nogo instituta usovershenstvovaniya vrachey i kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof.V.V.Kovanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(AORTIC VALVE, dis.

insuff., surg., review (Rus))

DOBROVA, N.B., kand. med. nauk (Moskva, K-9, Sobinovskiy per. d.6, kv. 14)  
KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Prophylaxis and treatment of cardiac complications in surgery of  
the heart and large vessels under hypothermia. Vest. khir. 82 no.5:  
90-94 My '59. (MIRA 12:7)

1. Iz kafedry operativnoy khirurgii (zav. - prof. V.V. Kovanov) 1-go  
Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.  
(HEART--SURGERY)

SOLOV'YEV, G.M., starshiy nauchnyy sotrudnik; SHUMAKOV, V.I., kand.med.  
nauk; KHIL'KIN, A.M., aspirant

Method for longitudinal sternotomy in approaching the heart.  
Vest.khir. '86 no.3:38-43 Mr '61. (MIRA 14:3)

1. Iz gosspital'noy khirurgicheskoy kliniki (dir. - prof. B.V.  
Petrovskiy) i kafedry operativnoy khirurgii (zav. - prof. V.V.  
Kovanov) 1-go Moskovskogo ordena Lenina meditsinskogo instituta  
im. I.M. Sechenova.  
(HEART-SURGERY) (STERNUM-SURGERY)

KHIL'KIN, A. M. (Moskva, 2-ya Cheremushkinskaya ul., d. 17, korp. 1,  
kv. 51); KHUDYAKOVA, M. I.

Surgical anatomy of the aortic valve. Grud. khir. no.5:3-7 '61.  
(MIRA 15:2)

1. Kafedra operativnoy khirurgii i topograficheskoy anatomii  
(sav. - chlen-korrespondent AMN SSSR prof. V. V. Kovanov) i Mos-  
kovskogo ordena Lenina meditsinskogo instituta imeni I. M.  
Sechenova.

(AORTIC VALVE)



KHIL'KIN, A.M. (Moskva, 2-ya Cherepushkinskaya ul., d.9, kv.51);  
LEMENEV, V.L.

Topographical anatomical approaches in diseases of the aortic valves. Grud. khir. 2 no.4:15-19 JI-Ag '60. (MIRA 15:6)

1. Iz kafedry operativnoy khirurgii I Moskovskogo ordena  
Lenina meditsinskogo instituta imeni I.M. Sechenova (zav. -  
prof. V.V. Koyanov) i khirurgicheskoy kliniki (zav. - ~~prof.~~  
D.M. Grozdov) TSentral'nogo ordena Lenina instituta gematologii  
i perelivaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR  
prof. A.A. Bagdasarov).  
(AORTIC VALVE---SURGERY)

KHIL'KIN, A.M.

New methodology of producing dosed chronic aortic insufficiency.  
Eksp. khir. i anest. 7 no.5:36-38 S-O '62.

(MIRA 17:10)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii  
(zav.-prof. V.V. Kovanov) I Moskovskogo ordena Lenina meditsin-  
skogo instituta imeni Sechenova.

KHIL'KIN, A.M.

Plastic surgery for experimental aortic insufficiency; preliminary report. Trudy 1-go MMI 16:60-65'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Per-  
vogo Moskovskogo ordena Lenina meditsinskogo instituta.  
(AORTIC VALVE—SURGERY) (SURGERY, PLASTIC)

KHIL'KIN, A.M.; KHOREVSKIY, V.T.

Arteriopiezogram in experimental aortal insufficiency and  
after its correction. Trudy 1-go MMI 16:66-71'62.

(MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii  
(zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervo-  
go Moskovskogo ordena Lenina meditsinskogo instituta.

(AORTIC VALVE—DISEASES) (PUISE)

DOBROVA, N.B.; KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Experimental use of a cardiopulmonary preparation in surgery  
for the replacement of the ascending aorta and the arch.  
Trudy 1-go MMI 16:80-85'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy ana-  
tomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov)  
Pervogo Moskovskogo ordena Lenina  
(AORTA—SURGERY) (SURGERY, PLASTIC)

DOEROVA, N.B.; KONSTANTINOV, B.A.; KHIL'KIN, A.M.

Method of switching arteries and temporary clamping in surgery for the replacement of the aortal arch in an experiment. Trudy 1-go MMI 16:72-79'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo otdena Lenina meditsinskogo instituta.  
(ARTERIES—SURGERY)

KOVANOV, V.V.; KHIL'KIN, A.M.

Plastic surgery in experimental aortic insufficiency. Eksper.  
khir. i anest. 8 no.3:34-40 My-Je '63 (MIRA 17:1)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii  
I Moskovskogo ordena Lenina meditsinskogo instituta.

KOVANOV, V.V.; PAVLENKO, S.M.; MEDELYANOVSKIY, A.N.;  
BOGDANOVA, Ye.V.; KISELEV, O.I.; KHIL'KIN, A.M.; FAL'KOVSKIY,  
G.A.

Method of phasic control of the blood circulation. Trudy po  
nov. app. i metod. no. 1: 86-92 '63 (MIRA 16:12)



FEL'DMAN, S.B.; MEYERSON, F.Z.; MARKOVSKAYA, G.I.; SHENDEROV, S.M.;  
KHIL'KIN, A.M.

Comparative studies on the duration of systolic phases and intracardiac hemodynamics in progressive experimental aortic diseases. Kardiologiya 5 no.2:28-31 Mr-Apr '65. (MIRA 18:7)

1. Propedevticheskaya terapevticheskaya klinika (zav. - deystvitel'nyy chlen AMN SSSR prof. V.Kh.Vasilenko) i Moskovskogo meditsinskogo instituta imeni I.M.Sechenova i laboratoriya fiziologii i patologii serdtsa Instituta normal'noy i patologicheskoy fiziologii (direktor - deystvitel'nyy chlen AMN SSSR prof. V.V.Parin) AMN SSSR.

KHIL'KIN, A.M.; DRONOV, A.F.; SHEKHTER, A.B.; KUT'IN, V.A.; ISTRANOV, L.P.;  
KASPARYANTS, S.A.

Use of semibiologic prostheses in vascular surgery. Report No.1.  
Eksp. khir. i anest. no.1:26-30 '65. (MIRA 18:11)

1. I Moskovskiy ordena Lenina meditsinskiy institut imeni I.M. Sechenova (direktor - deystvitel'nyy chlen AMN SSSR prof. V.V. Kovanov), Tekhnologicheskiy institut legkoy promyshlennosti (direktor - prof. I.P. Strakhov), Vsesoyuznyy nauchno-issledovatel'skiy institut kozhevennoy promyshlennosti (direktor - B.D. Breyev), Moskva.

POGREBITSKIY, B.D. [Pohrebyts'kiy, B.D.], insh., KHAZANET, L.L., insh.;  
KHIL'KO, A.V. [Khyl'ko, A.V.], insh.

BSM-1,5 bulldozer-scraper. Mekh. sil'. hosp. 11 no.11:27-28 N '60.  
(MIRA 13:11)

(Farm equipment)

KHIL'KO, B.

Working with raw meat products. Obshchestv.pit. no.7:30 Jl '60.

(MIRA 13:8)

1. Glavnyy bukhgalter Dnepropetrovskogo tresta stolovykh.  
(Dnepropetrovsk--Restaurants, lunchrooms, etc.)

KHIL'KO, D.R.; OSTAPENKO, M.M. (Stalinskaya oblast')

Treatment of durine in horses. Veterinariia 36 no.2:40 F '59.  
(MIRA 12:2)

1. Glavnyy vetrach Konstantinovskogo rayona (for Khil'ko). 2. Zaveduyushchiy Drushkovskoy gorvetlechebnitsey (for Ostapenko).  
(Dourine)

SOV/58-59-5-11624

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 5, p 243 (USSR)

AUTHOR: Khil'ko, O.I.

TITLE: Electrooptical Properties<sup>21</sup> of Colloids<sup>9</sup>

PERIODICAL: Sb. rabot stud. nauchn. o-va. Leningr. in-t tochnoy mekhan. i optiki,  
1958, Nr 35, pp 50 - 56

ABSTRACT: The author investigates optical anisotropy in solutions of lyophobic colloids the molecules of which are strong dipoles. When a  $\eta$ -pulsed electric field is applied to a vessel containing such a solution, polarized light passing through this vessel is intensity-modulated with the frequency of the change in the  $\eta$ -pulses. The modulation of the light is recorded on an oscillograph. The author determines the geometrical position of the axis of greatest absorption for nonspherical molecules by measuring the dichroism in laminar flow. ✓

L.D. Rozenshteyn

Card 1/1

TOLSTOY, N.A.; SPARTAKOV, A.A.; KHIL'KO, G.I.

Electrooptical properties of lyophobic colloids. Part 1:  
Statement of the problem, principal methods and results.  
Koll. zhur. 22 no. 6:705-716 M-D '60. (MIRA 13:12)

1. Leningradskiy tekhnologicheskii institut imeni Lenseveta,  
Kafedra fiziki.

(Colloids--Optical properties)

24.2600

h3119  
S/181/62/004/011/018/049  
B104/B102

AUTHORS: Tolstoy, N. A., Khil'ko, G. I., Ryskin, A. I., and Trusov, A. A.

TITLE: The relation between the luminescence and photoelectric properties in a ZnS-Mn phosphor

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3177 - 3184

TEXT: The object here is to establish quantitative and kinetic relations between photoelectric aspects and the luminescence of the photo-semiconduction mechanism in the ZnS-Mn phosphor, which has the property of scintillative deexcitation of luminescence. ZnS-Mn ( $10^{-3}$  g/g) placed in a capacitor is excited by two successive light flashes from two flash lamps positioned in front of a concave mirror. The interval between the light pulses is varied automatically from 0.1 to 10 sec. Intervals greater than 10 sec are regulated by hand. The first ultra-violet light pulse produces in the capacitor a current pulse corresponding to the motion of electrons in the direction of the incident beam. The second yellowish-green light pulse produces a signal whose amplitude depends on the time interval  $t_{\text{dark}} = t_d$  between the two light pulses. It reaches a maximum for a certain time Card (1/3)



S/181/62/004/011/018/049  
B104/B102

The relation between the luminescence...

interval  $t_{\max}$ .  $t_{\max}$  increases rapidly with decreasing temperature; for  $t_{\max} \rightarrow \infty$  the signal amplitude becomes zero. For  $t_d \ll t_{\max}$  the signal excited by the second pulse has opposite sign to that excited by the first light pulse. With increasing  $t_d$  ( $t_d \ll t_{\max}$ ) the signal of the second pulse becomes negative and goes through a maximum. The amplitude of the signal of the second light pulse is proportional to the light pulse but is independent of the ultra-violet light impulse. The signal of the second light impulse arises from the density gradient of the carriers localized in the excited state. The signs of the signals are the same for both light pulses. If, in the interval between the light pulses, infra-red light falls on the phosphor,  $t_{\max}$  becomes shorter. Further,  $t_{\max}$  depends on  $T$  in practically the same way as the scintillative deexcitation of the red luminescence band of this phosphor. Both effects are interpreted as being due to the relocalization of the holes from the centers of the blue luminescence to those of the red. The depth of the "blue" hole levels is 0.67 eV and their frequency factor is  $\approx 0.7 \cdot 10^{13} \text{ sec}^{-1}$ . There are 4 figures.

Card 2/3

The relation between the luminescence...

S/181/62/004/011/018/049  
B104/B102

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova,  
Leningrad (State Optical Institute imeni S. I. Vavilov,  
Leningrad)

SUBMITTED: June 21, 1962

Card 3/3

RYSKIN, A.I.; KHIL'KO, G.I.; MAKSAKOV, B.I.; DUBENSKIY, K.K.

Absorption spectrum of  $Mn^{2+}$  ions in ZnS single crystals. Opt. i  
spektr. 16 no.2:274-278 F '64. (MIRA 17:4)

TOLSTOY, N.A.; KHIL'KO, G.I.; RYSKIN, A.I.; TRUSOV, A.A.

Relation between luminescent and photoelectric phenomena  
in ZnS-Mn. Fiz. tver. tela 4 no.11:3177-3184 N '62.

(MIRA 15:12)

1. Gosudarstvennyy opticheskiy institut imeni  
S.I. Vavilova, Leningrad.

(Luminescent substances)  
(Photoelectricity)

RYSKIN, A.I.; TOLSTOY, N.A.; KHIL'KO, G.I.

Flashlike rise of luminescence. Part 4. Opt. i spektr. 15 no.5:  
659-666 N '63. (MIRA 16:12)

ACCESSION NR: AP4020929

S/0051/54/016/002/0274/0275

AUTHOR: Ry\*skin, A.I.; Khil'ko, G.I.; Maksakov, B.I.; Dubenskiy, K.K.

TITLE: Absorption spectra of the divalent Mn ion in ZnS single crystals

SOURCE: Optika i spektroskopiya, v.16, no.2, 1964, 274-278

TOPIC TAGS: manganese ion absorption, manganese in zinc sulfide, manganese activated zinc sulfide, manganese 2+, zinc sulfide

ABSTRACT: The absorption spectrum of  $Mn^{2+}$  in different hosts has been studied by several investigators, but mostly with the material in the polycrystalline state. In view of advances in techniques for growing large ZnS crystals and development of crystal field theory, it was deemed worthwhile to undertake the present investigation of the absorption bands of  $Mn^{2+}$  in ZnS single crystals. It is possible that manganese also enters the sulfide lattice in trivalent form, but this is questionable and so far unproved. The Mn activated ZnS crystals were grown from melts under pressure (argon at 150 atm), using crucibles from 10 to 30 mm in diameter. The crucible displacement rate was 8 mm/hour. The initial material was luminescence pure ZnS heated for 6-7 hours in a stream of purified argon. One of the investigated

1/2  
Card

ACCESSION NR: APL020929

crystals was prepared with  $ZnCl_2$  flux and contained 2.4 atomic percent Mn (introduced in the form of  $MnSO_4$ ); another crystal was grown with  $MnCl_2$  flux and contained 3.8 atomic percent Mn. The intrinsic (non-Mn) absorption of the former extended further into the long wavelength region, probably due to the presence of excess zinc. The spectra of the crystals were recorded at room temperature by means of an SF-4 spectrophotometer and at liquid nitrogen (77°K) temperature and liquid helium (4.2°K) by means of a quartz optics Q-12 spectrograph. The low temperature spectra were recorded in polarized light. Traces of the absorption spectra at the three temperatures and of the structure of the 21 645  $cm^{-1}$  band at 4.2°K for  $\parallel$  and  $\perp$  to the c axis are reproduced. The structure of the spectra of the two above mentioned crystals is rather similar. Five bands are identified, i.e., associated with transitions between the  $Mn^{2+}$  levels in a field of cubic symmetry. The structure of the absorption bands is discussed briefly. Orig.art.has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 20Mar63

SUB CODE: PH

DATE ACQ: 02Apr64

NR REF SOV: 003

ENCL: 00

OTHER: 015

Card 2/2

L 11626-66 EAT(1)/EAT(2)/EAT(3)/EAT(4) LIP(a) m  
ACC NR: AP5025307 SOURCE CODE: UR/0051/65/019/004/0635/0637

AUTHOR: Dubenskiy, K.K.; Kariss, Ya. E.; Ryskin, A.I.; Feofilov, P.P.; Khil'ko, G.I. 31

ORG: none B

TITLE: Determination of the effective cross section of collisions of the second kind between mercury and zinc atoms

SOURCE: Optika i spektroskopiya, v. 19, no. 4, 1965, 635-637

TOPIC TAGS: collision cross section, mercury, zinc, fluorescence spectrum

ABSTRACT: The collision cross section was determined at 736K at high values of  $\Delta E$  (the energy difference between the levels of the colliding atoms) for the Hg-Zn pair with an energy difference in levels Hg  $6^3P_1$  and Zn  $4^3P_1$  of  $6911 \text{ cm}^{-1}$ . The determination was based on the relative intensity of sensitized fluorescence of Zn  $3076 \text{ \AA}$  ( $4^3P_1 - 4^1S_0$ ) and Hg  $2537 \text{ \AA}$  ( $6^3P_1 - 6^1S_0$ ). The effective collision cross section was determined from the formula

$$\langle \sigma v \rangle = \frac{I_{\text{Zn}}}{I_{\text{Hg}}} \frac{A_{\text{Zn}}}{N_{\text{Hg}}} \frac{v_{\text{Hg}}}{v_{\text{Zn}}} \frac{\int_{-\infty}^{+\infty} [1 - e^{-k_{\text{Hg}}(v)l}] dv}{\int_{-\infty}^{+\infty} [1 - e^{-k_{\text{Zn}}(v)l}] dv} \quad (1)$$

Card 1/2

UDC: 539.186.3:546.49:546.47



L 11626-66

ACC NR: AP5025307

where  $\frac{I_{Zn}}{I_{Hg}}$  is the relative intensity of the fluorescence lines Zn 3076 Å and Hg 2537 Å; 0

$A_{Zn}$  is the probability of a spontaneous transition for zinc;  $N_{Hg}$  is the concentration of mercury atoms in the container;  $\nu_{Hg}$ ,  $\nu_{Zn}$  are the frequencies of the fluorescence lines of mercury and zinc;  $l$  is the thickness of the luminescent layer. The value of  $\langle \sigma v \rangle$  was found to be  $5 \times 10^{14} \text{ cm}^3 \text{ sec}^{-1}$ . If in order to evaluate  $\sigma$  it is assumed that  $v$  is the most probable velocity of the relative motion of zinc and mercury atoms, then  $\sigma \sim 1 \times 10^{-18} \text{ cm}^2$ . Orig. art. has: 2 formulas.

SUB CODE: 07, 20 / SUBM DATE: 26Dec64 / ORIG REF: 001 / OTH REF: 007

TS  
2/2  
Card

TSYGODA, I.M.; KAZAKOV, V.N.; KOLESHNIKOV, N.A.; BRYUKHANOV, N.G.; BURBA, A.A.;  
SADYKOV, V.I.; FIGAREV, A.D.; Primali uchastiye: PECHENKIN, S.N.;  
GLAZACHEV, G.M.; KHVESYUK, F.I.; KODINTSEV, A.V.; YERGALIYEV, E.Ye.;  
YERMAKOVA, Z.S.; NOVAK, I.V.; KHIL'KO, I.Ye.; LYASHEVSKIY, R.A.; PROKHOROV, A.I.;  
CHERTOVA, N.G.; URUBKO, V.N.; KUGUCHEV, V.V.

Industrial testing of a flow sheet for the processing of Altai complex metal ores along the lines of the flow sheet used at the Mednogorskii Combine. TSvet. met. 36 no.12:12-15 D '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy gorno-metallurgicheskiy institut tsvetnykh metallov (for Pechenkin, Glazachev, Khvesyuk, Kodintsev). 2. Irtyshskiy polimetallicheskiy kombinat (for Yergaliyev, Yermakova). 3. Mednogorskiy medno-sernyy kombinat (for Novak, Khil'ko, Lyashevskiy, Prokhorov, Chertova, Urubko, Kuguchev).

1. BURYASHINA, V. - KHILKO, M.
2. USSR (600)
4. Baking
7. Perfection of work methods and improvement of technical processes. Khol. tekhn. 29 no. 3, 1952
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

KHIL'KO, M.F., inzh.

Leveling the basic area of an earth railroad bed in morainic  
soil. Transp. stroi. 12 no.4:13-14 Ap '62. (MIRA 15:5)  
(Railroads--Earthwork)

KHIL'KO, M.F., inzh.

Organization of the work of the head station in a wooded and swampy  
locality. Transp. stroi. 12 no.11:14 N '62. (MIRA 15:14)  
(Railroads—Construction)

ANTONOV, G.I.; MINKOVICH, B.D.; SHVARTSER, M.A.; SHAKHOV, G.S.; SEMENOV,  
I.N.; KHIL'KO, M.M.; MOLCHANOVA, M.I.

Production and service testing of kilned and non-kilned short  
forsterite bricks. Ogneupory 25 no.6:244-251 '60.(MIRA 13:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (for  
Antonov, Minkovich). 2. Panteleymonovskiy ogneuporny zavod im.  
Kirova (for Shvarts, Shakhov, Semenov). 3. Makeyevskiy  
metallurgicheskoy zavod im.Kirova (for Khil'ko, Molchanova).  
(Blast furnaces)  
(Firebrick)

ZHUKOV, A.I., inzh.; KHIL'KO, M.M., inzh.; MERSHCHIY, N.P.; SHKLYAR, M.S.;  
SLEZ, L.G.

Practice of firing open-hearth furnaces with natural gas by the method  
of self-carburization. Stal' 21 no. 4:307-311 Ap '61. (MIRA 14:4)  
(Open-hearth furnaces—Combustion) (Gas, Natural)

KHIL'KO, M.M.; SHKLYAR, M.S.

Firing open-hearth furnaces with a mixture of coke and natural  
gases. Metallurg 6 no.7:11-13 J1 '61. (MIRA 14:6)

1. Iz Informatsionnogo listka TSentral'nogo byuro tekhnicheskoy  
informatsii Stalinskogo sovnarkhoza.  
(Open-hearth furnaces) (Gas as fuel)



MIROSHNICHENKO, A.N.; VINOKUR, S.B.; ANTONOV, G.I.; MINKOVICH, B.D.;  
MOLCHANOVA, M.M.; FAYNERMAN, B.A.; KHIL'KO, M.M.

Magnesite brick for the checkerwork of open-hearth furnace  
regenerator. Ogneupory 25 no.5:197-207 '60. (MIRA 14:5)  
(Firebrick) (Open-hearth furnaces)

KULIK, A.I.; KARMANOVA, T.S.; YASTREMSKIY, I.S.; KHIL'KO, M.M.; PAPIN, T.I.

Application of paraffin to unfired magnesite nozzles and liners.  
Ogneupory 26 no.3:113-114 '61. (MIRA 14:4)

1. Chasov-Yarskiy kombinat ogneupornykh izdeliy (for Kulik, Karmanova, Yastremskiy).
  2. Makeyevskiy metallurgicheskiy zavod im. Kirova (for Khil'ko).
  3. Konstantinovskiy metallurgicheskiy zavod im. Frunze (for Papin).
- (Waterproofing) (Foundries—Equipment and supplies)

KHIL'KO, M.M.; ANTONOV, G.I.

Use of forsterite checkers in high capacity open-hearth furnaces operating with oxygen. Ogneupory 27 no.3:141 '62. (MIRA 15:3)

1. Makeyevskiy metallurgicheskii zavod imeni Kirova (for Khil'ko).
  2. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (for Antonov).
- (Open-hearth furnaces) (Forsterite)

ZHUKOV, A.I.; KHIL'KO, M.M.; SHKLYAR, M.S.; KAZANTSEV, Ye.I. Prinimali  
uchastiye: BLASHCHUK, N.M., inzh.; YARMYSH, V.A., inzh.;  
PARKHOMENKO, D.M., inzh.; BULI, V.G., inzh.; BIDENKO, R.V., inzh.;  
PASIKOV, N.V., inzh.; ZEMLYANOV, N.G., inzh.; TARASENKO, A.A., inzh.

Firing open-hearth furnaces with a mixture of cold coke and  
natural gases. Stal' 21 no.12:1068-1070 D '61.

(MIRA 14:12)

(Open-hearth furnaces—Equipment and supplies)  
(Gas as fuel)

KHIL'KO, M.M., inzh.; ANTONOV, G.I., inzh.

Results of using forsterite checkers in open-hearth furnaces  
operating with oxygen. Met. i gornorud. prom. no.6:31-34  
N-D '62. (MIRA 17:8)

1. Makeyevskiy metallurgicheskiy zavod im. Kirova (for Khil'ko).
2. Ukrainskiy nauchno-issledovatel'skiy institut ogneporov  
(for Antonov).

ANTONOV, G.I.; KHIL'KO, M.M.

Use of unfired checker refractories. Met. i gornorud. prom.  
no.3:37-40 My-Je '62. (MIRA 15:9)

1. Ukrainskiy institut ogneporov (for Antonov). 2. Metallurgicheskiy  
zavod imeni Kirova (for Khil'ko).

(Refractory materials)  
(Open-hearth furnaces--Design and construction)

VECHER, N.A., inzh.; GERMAIDZE, G. Ye., inzh.; PANFILOV, M.I., dotsent;  
KHIL'KO, M.M., inzh.; MERSHCHIY, N.P., inzh.; ALFEROV, K.S., inzh.;  
ANTONOV, S.P.; DIKSHTYIN, Ye.I.; YAGNYUK, M.I.; BELIKOV, K.N.;  
GONCHAREYSKIY, Ya.A.; TRIFONOV, A.G.; SEDACH, G.A.

"Open-hearth plants with large-capacity furnaces" by D.A. Smoliarenko,  
N.I. Efanova. Reviewed by N.A. Vecher and others. Stal' 21 no.2:125-126  
P '61. (MIRA 14:3)

1. Sverdlovskiy sovet narodnogo khozyaystva (for Vecher, Germaidze, Pan-  
filov).

(Open-hearth furnace—Design and construction)  
(Smoliarenko, D.A.) (Efanova, N.I.)

KHIL'KO, M.M.; MOLCHANOVA, M.I.; MACHKOVSKIY, V.A.

Making and operating a rammed bottom in open-hearth furnaces.  
Met.1 gornorud.prom. no.5:78-80 S-O '62. (MIRA 16:1)

1. Makeyevskiy metallurgicheskiy zavod imeni Kirova.  
(Open-hearth furnaces—Maintenance and repair)



~~Khil'ko~~ M.M.; MOLCHANOVA, M.I.; KOTIK, P.L.; LYUDVINSKIY, A.I.;  
KOREN, L.N.; KHARCHENKO, I.G.

Crown firebrick of a finely ground mixture of magnesite and  
chromite. Ogneupory 28 no.6:256-258 '63. (MIRA 16:6)

1. Makeyevskiy metallurgicheskiy zavod im. Korova (for Khil'ko,  
Molchanova).
2. Nikitovskiy dolomitovyy kombinat (for Kotik).
3. Dnepropetrovskiy metallurgicheskiy institut (for Lyudvinskiy,  
Koren, Kharchenko).

(Firebrick)

POKOTILO, Ye.P.; KHIL'KO, M.M.

Redesign of open-hearth furnaces. Vop. proizv. stali no.9:  
46-50 '63. (MIRA 16:9)

ANTONOV, G.I.; KOSOGOLOV, V.V.; NEDOSVITIY, V.P.; VINOGRADOV, N.I.; KHIL'KO,  
M.M.; MOECHANOVA, M.I.

New design of ribbed arches with reinforced supports. Metallurg  
9 no.2:18-21 F '64. (MIRA 17:3)

1. Ukrainskiy institut ogneuporov i Makeyevskiy metallurgicheskiy  
zavod.

LYUDVINSKIY, A.I.; ROMANOVSKIY, L.B.; KOREN, L.N.; MISHCHENKO, V.S.;  
FROLOVA, A.I.; KOTIK, P.L.; KHIL'KO, M.M.; MOLCHANOVA, M.I.;  
VINOGRADOV, N.M.; PYLAYEV, S.V.; BEYGUL, Ye.I.; ROKHLIN, N.A.;  
MASYUKOV, N.T.; BONDAR', V.I.

In the country's steelmaking plants. Metallurg 9 no.9:  
16-19 S '64. (MIRA 17:10)

1. Saldinskiy metallurgicheskiy zavod (for Pylayev).
2. Zavod im. Dzerzhinskogo (for Beygul, Rokhlin).
3. Yenakiyevskiy metallurgicheskiy zavod (for Masyukov, Bondar').